

6938

6938

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. Various Office No. H-6938

LOCALITY

State Alaska - Aleutian Islands

General locality ~~Aleutian Islands~~ - Semichi Is

Locality Shemya Island

1945

CHIEF OF PARTY

G. C. Mattison W. M. Scaife
EXPLORER HYDROGRAPHER

LIBRARY & ARCHIVES

DATE _____

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. Various

REGISTER NO. H-6938

State Alaska - Aleutian Islands

General locality Aleutian Islands - Semichl Islands

Locality Shemya Island

Scale 1:10,000 Date of survey May to Nov., 1943

Vessel HYDROGRAPHER EXPLORER

Chief of Party W. M. Scaife G. G. Mattison

G.C.M., L.G.T., R.C.R., G.R.S. of the EXPLORER
Surveyed by W.M.S., R. C. L., and others of the HYDROGRAPHER

Protracted by W. M. Martin

Soundings penciled by W. M. Martin

Soundings in fathoms ~~feet~~ Fathoms

Plane of reference MLLW

Subdivision of wire dragged areas by _____

Inked by R.H. Carstens

Verified by R.H. Carstens

The HYDROGRAPHER received instructions from the Navy.
Instructions dated The EXPLORER received instructions from the
Liaison Officer, 11/5/43.

Remarks: General Instructions for season, Project OS-218, April 16, 1943.

Processing of records and Smooth Sheet by Seattle Processing Office.

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List of Signals

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POST-OFFICE ADDRESS:

U.S.C. & G.S.S. SURVEYOR
400 Insurance Building
Seattle, 4, Washington

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

March 14, 1944

To: Officer in Charge
Processing Office
Seattle, Washington

From: Commanding Officer
U.S.C. & G.S.S. SURVEYOR

Subject: Special survey for Army - Alcan Cove.

A special survey of the dock area in Alcan Cove, Shemya Island was requested by the Army. Attempts to accomplish the work were unsuccessful till just before the SURVEYOR was due to sail in convoy so it was impossible to process the records. Consequently, the work was done, in so far as practicable, except for a small portion on Nov. 27, 1943 and the boat sheet, fathogram record, and sounding record turned immediately over to the Army for processing. The field party put the recorded soundings on the boat sheet.

The boat sheet on a scale of 1 = 200 ft., together with the location of the signals used, were furnished by the Army. Lines were run on ranges in so far as possible.

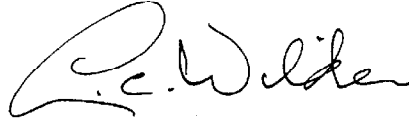
Tides, if used for final reduction, were furnished by the Army. No tide or velocity corrections were used on the original boat sheet.

Soundings were in feet using an 808 fathometer. A speed count and bar check were made at the beginning of each days work. The fathometer appeared to operate normally throughout the day.



See Print N-177-29 bp. 38297
See Processing Office Notes

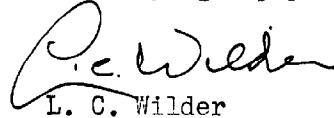
The area surveyed was fairly well covered and no dangers were found that were not known to exist. It was impossible to survey all of the area desired due to breakers. Breakers were noted constantly between the two docks and along the reef area. The sea had a 3 to 5 ft. swell all during the sounding period. Bottom samples were taken in areas requested.



L.C. WILDER
Commanding Officer
U.S.C. & G.S.S. SURVEYOR

jb

This field work, which totaled about three hours of field work under exceedingly difficult weather conditions, was handed to Army Engineer representatives upon completion, since, on account of weather, it was impossible to take it aboard the Ship SURVEYOR for scanning and inking soundings. The area covered was 300 - 600 yds. in diameter and was accomplished for extending a dock and for laying a pipe line.



L. C. Wilder

not plotted on Profile Sheet
→ standby

-General Statement-

Surveys of Shemya Island

Adequate port facilities for handling the vast quantities of gas, oil, and materiel presents one of the most difficult problems in the development and maintenance of a major air base on Shemya Island.

In reviewing this sheet of Shemya Island, it should be borne in mind that the survey by each party was made for a specific purpose at the request of the military authorities. In other words, there was no plan for making a complete survey.

The party on the HYDROGRAPHER made the first detailed hydrographic survey of Alcan Cove, scale 1:10,000, and of a bight in the south shore of Shemya, scale 1:5,000. To control this work, a planetable survey on a scale of 1:10,000 was made. The grid used on this survey is not related to that of the Army Engineers which was made later.

The Army Engineers made a very detailed topographic survey, the original of which, I understand, was plotted on a scale of 1 inch = 100 ft. or a natural scale of 1:1,200. This survey was controlled by an independent net of triangulation and by closed traverses. The local scheme of triangulation is shown on Army print No. N-177-P-23. ^(bp. 37872) As only one copy of this print was available in Seattle, this was furnished to the party on the SURVEYOR, who has orders to take up work in the vicinity of Shemya. It is thought possible that a copy of this print was made in the Washington Office when it was forwarded by the party on the EXPLORER for use in charting purposes.

The Army topography is shown on print No. N-177-P-22, ^{bp 37571} which is being forwarded under separate cover. The shoreline on this print was reduced and transferred to the smooth sheet, except in some places, where it was felt that the high water line was better interpreted on the topographic sheet of the HYDROGRAPHER.

The signals used by the party on the EXPLORER were selected by an officer from that vessel and were constructed and located by a detail of men from the Army Engineers. The locations of all of these signals were tied in to existing Army control and were computed by the Army Engineers, who furnished the coordinates of each signal to the party on the EXPLORER.

At the time this work was done, only a few of the signals used by the party on the HYDROGRAPHER could be recovered. These few common signals were used in coordinating the surveys of the two parties, as explained in the descriptive report.

Triangulation station SHEMA was established and located by Norman Sylar of the Army Engineers. The location of this signal was computed on Scaife's datum on Attu Island, but unfortunately there is no tie in azimuth between this scheme of triangulation and the local Army Engineers scheme on Shemya Island.

Late in the season, a party from the SURVEYOR made a few detached soundings in Alcan Cove. This work was completed just prior to the ship's joining a convoy to the South, so the records were not processed by that party, but were turned over directly to the Army Engineers. These soundings are shown on an Army Engineers blueprint as reduced and plotted by them. This blueprint is being forwarded under separate cover. The soundings by the party on the SURVEYOR are not plotted on the smooth sheet as submitted.

F. H. Hardy

F. H. Hardy
Officer in Charge,
Seattle Processing Office.

FIELD NOTES FOR DESCRIPTIVE REPORT

Hydrographic Survey of

South Side of Shemya Id.

Semichi Islands - 1943

1:19,200 Sheet (offshore)

Instructions: Project CS-218, dated April 16, 1943; letter from Lt. Comdr., C. M. Durgin, dated November 5, 1943.

Area: This hydrographic survey was executed at the request of the U.S. Army and included development of the approaches to Beach "Fox", on the south side of Shemya Island, about $\frac{1}{2}$ mile west of the southeast point of the island. The scale is 1:19,200, or 1 inch = 1600 feet.

Equipment: All hydrography was done with the 808 type of fathometer with oscillator and receiver units mounted in the bilges of a standard hydrographic launch.

Control: Triangulation and topographic surveys were executed by the U. S. Army Engineers. Signals were plotted by coordinates on a standard grid. A few additional signals were located by sextant cuts. The hydrography was controlled by standard 3 point fix from sextant angles.

Development: The sounding lines were spaced approximately 200 meters apart. Additional lines were run in order that the depth curves could be accurately determined.

Records: All fathograms have been checked and critical soundings entered in the records.

Respectfully submitted

Roger C. Rowse

Roger C. Rowse
Lieutenant Commander
U.S.C. & G.S.S. EXPLORER

Approved & forwarded

G. C. Mattison

G. C. Mattison
Commanding Officer
U.S.C. & G.S.S. EXPLORER

A projection can be constructed as soon as additional information is received from U.S. Engineers at Shemya.

Refers to angle at Shemya between a line of latitude of local A scheme. This had not been done as late as April 1, 1944 at St. Hardy.

Seattle Processing Office Notes

H-6938

Aleutian Islands

Semichi Islands - Shemya Island

Scale 1:10,000

The hydrography on the north shore of Shemya Island and through the pass west of the island is by the HYDROGRAPHER's party using boat sheets 101, 102, and 104 on scale 1:10,000. The datum is an independent rectangular grid (different from the Army's grid) with 1,000 yard grid lines. Near the middle of the south shore, the HYDROGRAPHER also made the development off signal Mid on scale 1:5,000, boat sheet 102-1. A planetable survey was made by the HYDROGRAPHER's party on brown boat sheet paper, numbered 103, scale 1:10,000.
T-6958 (1962)

The hydrography on the south shore except the development off signal Mid and a few other lines west of Mid is by the party on the EXPLORER using one boat sheet inshore, on scale 1:9,600, and two sheets offshore, one of which is a tracing, on scale of 1:19,200. The datum used by that party is the local Army grid. All of the signals except Pole and Rad were located for the EXPLORER's party by the Army Engineers from the traverse around the island. The coordinates in feet were supplied to the EXPLORER, and that information has been copied in this report.

All of this work is plotted on one smooth sheet, scale 1:10,000, based on the Army grid.

Datum-

There is one triangulation station SHEMYA on the island. This has geodetic coordinates and was established by Sclar of the Army Engineers in 1943. No direction has been observed at SHEMYA to a line in the local grid, and for this reason the projection was omitted. Telegraphic information has recently been received that the Army Engineers on Shemya Island have been prevented by unfavorable weather from observing a direction at SHEMYA to properly orient the Army grid. The Army's local grid is expressed in feet. The origin of rectangular coordinates is about 25,000 feet south and 100,000 feet west of the west end of Shemya Island. The Engineers made a triangulation survey of the island and ran a traverse around the island adjusted to the triangulation. Their grid is the datum of smooth sheet H-6938. *(1942)*

The azimuth of the grid is said to depend on several sights on the sun.

Control-

When the EXPLORER's party took up work on the south shore, the HYDROGRAPHER's signals had disappeared or were not recognizable. In cooperation with the Army Engineers, they placed new signals which were located by spurs from the Army's traverse. The HYDROGRAPHER's signal Las was found and rebuilt in the same position, being known as Fox to the EXPLORER.

Two prints of Shemya Island on scale of 1" = 400 ft. by the Engineers were furnished this office. They are N-177-P-22 Topography and N-177-P-23 Triangulation and Traverse. On the latter sheet, shown in the light of Alcan Cove, are three points, signals Lot, Lee, and Gab, which are common to the HYDROGRAPHER's topography. They were scaled, and the scaling is included in the list which is part of this report. These prints were forwarded to Washington to be used in the compilation of data for the recently published chart of Shemya Island. They were returned to this office, and the print showing Triangulation and Traverse has been turned over to the SURVEYOR, as it will be needed by that party for work this year and no other copy was available. *The print showing topography goes with the records to Washington.*

At the north point of Shemya Island is a pronounced well-defined rock knob. Apparently this is the highest point on the island. It can be seen and recognized from the south over other high points of the island. This point was used by the SURVEYOR (on adjacent sheets) under the name of Mya. The party on the HYDROGRAPHER located it as Top on their planetable survey. The position was scaled from the Army's topographic sheet N-177-P-34 (in 8 sheets, scale 1 inch = 200 feet. The scaling is in the accompanying list. A tracing of the Army's topographic sheet showing signal Top is part of this report.

There is no known relation between the origin and azimuth of the HYDROGRAPHER's grid and the Army's grid. However, on the smooth sheet (based on the Army grid) there are five points in common with the HYDROGRAPHER's planetable sheet 103. They are signals Las or Fox, Lot, Lee, Gab, and Top. When a tracing of the HYDROGRAPHER's topo was placed over the smooth sheet, holding Lot and orienting on Top, the distance Lot - Top on the tracing was about half a millimeter shorter than the smooth sheet distance. Again, holding Lot and orienting on Las (or Fox), the planetable tracing was about three millimeters long. There was also a slight angular difference between the tracing and the smooth sheet for Top - Lot - Las (or Fox). A proportional adjustment was made of the HYDROGRAPHER's signals from Lot to Top and from Lot to Las (or Fox) holding the smooth sheet positions as correct. *from Army traverse survey*

The EXPLORER did not use the HYDROGRAPHER's point Rock as a signal, but when the sounding boat passed (Positions 158-159b), they gave an estimated distance from the rock which agrees as well as guessed positions can be expected to agree. The HYDROGRAPHER's preliminary sheet shows this as a rock above H.W. The EXPLORER's party in their hydrographic notes call it a rock awash when the tide is $\frac{1}{2}$ feet above M.L.L.W., and it is thus shown on the smooth sheet. With the small range of tide in the vicinity of Shemya Island, this rock should show practically all of the time.

Signal Black-

This point was located from cuts at positions 27B, 58B, and 51C. There are other cuts which do not agree so well. There is a cut on the topo sheet (#103) to "top of big rock pinnacle," which is probably on this object. The point accepted seems to be the one preferred by the field party.

Shore Line-

The shore line is taken from the Army's sheet N-177-P-22, scale 1 inch = 400 feet, except where shore line is shown on the HYDROGRAPHER's sheet #103. The other dashed line on sheet #103 is a foul area line and not L.W.L. (See air photos U.S.A.A.F.- Army Map Service, V-31-204N36B, 8/11/42-12:10 PM, 12-25,000, Semichi Is., Photos 652.53 to 652.84.)

The differences in shore line between the planetable work of the HYDROGRAPHER and the Army's topographic sheet implies that the topographers held different definitions for shore line.

The islands in the passage west of Shemya are shown on the HYDROGRAPHER's sheet in a manner which implies low ledges covered at high tide with higher rocks projecting. Field officers who have seen these islands have the impression that the southern one (containing signal Bolo) is possibly 5 or 6 feet above high water. The next one north is 15 to 25 feet high, grassy, and the part above H.W. covers a considerable part of the islet. It is also believed that the large ledge projecting from H.W.M. on the point west of Alcan Cove is partly above H.W.M.

Reefs transferred to smooth sheet as shown on topo sheet T-6958

Junction-

At the junction of ship and launch work, approximately along an east-west line near northing 32,000, and ship's work is about a fathom shoaler than launch soundings.

Junction satisfactory

Geographic Name-

Skoots Island is so spelled on the Army's print N-177-P-22. It is written Scoot Island on chart 9125.

Fathograms- HYDROGRAPHER

The following notes on the HYDROGRAPHER's fathograms apply also to Sheets H-6936, H-6939⁽¹⁹⁴²⁾, H-6940⁽¹⁹⁴³⁾, and H-6845.

Fathograms - Ship HYDROGRAPHER:

In general, the party on the HYDROGRAPHER entered soundings in the volumes at positions only. In some books they maintained sounding entries at thirty second intervals.

The fathograms have been scanned in this office and the soundings entered for the usual intervals, all high points on the profile being entered at its proper time.

There are frequent long intervals on the fathograms with no positions indicated - 6, 8, or 10 positions skipped. These spaces were divided in proportion to time intervals between positions and scanned.

Index Correction-

In the report submitted by the party on the HYDROGRAPHER for the Korovin Bay sheet, Atka Island, H-6845, there are the following paragraphs:

"Ship soundings were obtained with a standard Navy NJ-3 or NMB-2 fathometer. The sounding records indicated which was being used. Both fathometers were calibrated for a velocity of 4800 feet per second. The NJ-3 fathometer is designed to give the depth below the oscillators. A constant correction of plus 2 fathoms was added to all NJ-3 soundings on the boat sheet. The NMB-2 fathometer was adjusted to give approximate true depths and no correction to NMB-2 soundings was applied on the boat sheet. Comparisons between wire soundings (vertical casts) and each fathometer are recorded in the sounding records.

Launch soundings were obtained with a standard Navy NK-1 fathometer which is similar to a Submarine Signal Co. 808 fathometer. The fathometers were set to give true depths by bar checks and lead line soundings on the bottom."

Since there are no reports from the HYDROGRAPHER concerning the sheets west of Atka, it is inferred that the statements concerning fathometers at Atka continued through the season. However, the type of sounding apparatus used is not always stated in the sounding record, and it is presumed that the same instrument was used on the different days in a book. In processing the sheet, the continuity of fathograms from book to book has been used as evidence of the continued use of the same fathometer, and the boat sheet plotting at two fathoms deeper than recorded soundings has been used as corroborative evidence of the use of the NJ-3.

There is no description of the NMB-2 fathometer in any of the HYDROGRAPHER's records. Apparently it was rarely used for recorded soundings. It is believed that whenever it was used entries were made in the records.

Echo Correction-

The party on the HYDROGRAPHER did not submit any fathometer corrections to be applied to their soundings. The echo corrections obtained by the EXPLORER's party for use on a Hughes fathometer calibrated for an assumed sound speed of 800 meters per second, the same as the instruments on the HYDROGRAPHER, were applied to the HYDROGRAPHER's soundings. These echo corrections vary from zero at 100 fathoms to plus ten fathoms at 1,000 fathoms depth. Since the corrections are less than one percent of the depth below 1,000 fathoms, no echo corrections have been applied below that depth.

Beach "E" (Easy), South shore of Shemya Island-

525 Meters south of signal Mid
425 " southwest of signal Rock

Between positions 57c and 58c the fathogram is difficult to interpret. This passes an area of about 2 fathoms as indicated by adjacent lines. It may be 15 feet with heavy kelp over it. The opinion of officers who accomplished the work as to the proper interpretation of the graph was asked. The point is being plotted as 6 feet. It has been referred to parties returning to the area. *verifier interpreted sdg as 15'. sdg not used.*

Alcan Cove - 500 Meters northwest from signal Lit-

Between positions 71 to 72e, Launch 2, HYDROGRAPHER, a sounding is entered in book 403, page 43, as 15 feet. On the fathogram this spot looks like 28 feet with kelp over it. The boat sheet soundings were taken directly from the fathogram as soundings were usually entered by the field party only at positions. The boat sheet sounding is 28 feet. This has been referred to the 1944 parties returning to the field. Meanwhile, it has been plotted as 15 feet. *sdg interpreted by verifier as 28' and so inked.*

Sun Sight for Azimuth-

The HYDROGRAPHER recorded the following angles from the line Lit-Boy to the Sun (Vol. 401, page 7) May 26, 1943, Lat. 52° 45' Long. 174° 06'.

Sun Azimuth, Lit and Boy in Range

G.C.T. (Chro. #1566)	α Vert. Angle	Inclined Angle α to Lit
7-55-12 $\frac{1}{2}$	03° 56.5	74° 45'
56-26	03 48.7	74 51
59-59	03 22.0	75 35
8-00-52	03 16.5	75 46

chron. correction not given

This was taken between 21:50 and 22:01:30 ship's time (150 meridian).

Shoal-

The shoals in the heavy kelp area in the vicinity of 17,000-18,000 North, 114,000-116,000 East should be examined with the lead as the fathogram has been badly obscured by the kelp.

Plotting of Positions 17A to 24A-(Vol. 7), Northing 39,000 Easting 112,000-

These positions are plotted on a gyro bearing and one angle. At position 16A, which is a 3 point fix, a gyro bearing of $209\frac{1}{2}$ degrees was observed to signal Boy. This scales 207 $\frac{3}{4}$ on the smooth sheet and indicates a correction of minus $\frac{3}{4}$ degrees applied to the gyro to give grid bearings. This correction was applied to bearings and courses in plotting these positions. The line from 20 to 21 diverged a point from the course. Position 20 was then plotted on bearing from Top, line and time to position 21, which agrees with a probable error of 30 min. in angle at position 20. Position 24 depends on course from position 23 which is parallel to course from 20 to 22.

Attention is called to the following positions:

<u>Northing feet</u>	<u>Easting feet</u>	<u>Position</u>	<u>Depth fms.</u>	<u>Remarks</u>
35,300	112,500	68,69,70e		Sunken rock - Located by 3 hydro outs. ✓
34,800	112,200	66-67e		Sunken rock - Located by 1 hydro cut and 2 transferred topo outs. ✓
28,800	106,500	Vol 7, p 48 72e	1 $\frac{4}{6}$	Center Aloan Cove, 400 meters off beach. ✓
28,500	107,700		1/2 ✓	
30,200	104,600			Sunken rock ^{probably} transferred from boat sheet. ^{from bp. 382TT} ✓
34,700	110,600	71-72e	2 $\frac{1}{2}$	Questioned sounding. Fathogram obscured by kelp. Boat sheet plotted 28 ft.
35,800	111,300	86-87e	6 $\frac{2}{6}$ ✓	²⁸ inked - similar kelp indications on other sdgs
28,600	102,300	45-46c	2 $\frac{1}{2}$ ✓	
24,800	101,100	3d	2 $\frac{1}{2}$ ✓	
22,500	103,200	143-144c	5 $\frac{1}{2}$ ✓	
21,300	102,800	9-10 c	8 ✓	

Northing feet	Easting feet	Position	Depth fms.	Remarks
20,100 18,700 19,000	105,200	136-137d	7 3/4 ✓	
	107,800	18-19c	5 1/2 ✓	
20,900	108,000	113-114b	4 ⁴ / ₆ ✓	
19,700	109,800	137c	4 4/6 ✓	
19,100	110,900	72-73b	3 2/6 ✓	
18,000	110,300	132-133d	7 ³ / ₄ ✓	
17,400	119,600	108-109c	3 5/6 ✓	
18,400	119,500	101-102c	2 5/6 ✓	
17,600	121,400	87-88a	4 ✓	
19,500	120,900	67-68a	1 4/6 ✓	
19,200	121,900	9-10a	2 4/6 ✓	
17,600	122,900	86-87a	3 ✓	
18,900	123,300	56-57a	2 1/6 ✓	
18,900	124,000	50-51a	1 ⁵ / ₆ ✓	
17,600	124,100	85a	3 1/6 ✓	
16,500	124,100	83-84a	4 ✓	
15,000	119,800	90-91a	3 5/6 ✓	
15,000	117,600	4b	5 5/6 ✓	
14,100	119,800	91-92a	5 5/6 ✓	
12,200	121,000	28-29a	5 5/6 ✓	
10,800	121,800	⁷ 36a	5 5/6 ✓	
10,900	122,500	53-54a	5 4/6 ✓	
10,200	122,500	54-55a	5 1/6 ✓	
9,400	122,500	54-55a	5 5/6	
9,600	124,000	79-80a	6 1/6 ✓	

Northing feet	Easting feet	Position	Depth fms.	Remarks
300	124,300	83-84c	9 1/2 ✓	
-100	123,700	75-76c	9 3/4 ✓	
22,700	105,200	148-149b	Rock	awash
18,000	112,200	50b	3 1/6 ✓	
19,100	112,300	80c	3 2/6 ✓	
19,000	113,100	88-89b	2 ✓	
17,200	114,100	33-34c	4 1/6 ✓	
17,800	113,500	40-41c	4 2/6 ✓	
18,100	113,800	64-65d	3 2/6 ✓	
18,400	114,250	^{18d} 53-54c	3 5/6 ✓	
17,300	114,700	47-48b	4 4/6 ✓	<i>1 1/2 - 1 1/2 fms on adjacent lines</i>
16,900	114,900	98-99d	4 5/6 ✓	<i>(not plotted)</i>
19,900	114,800	57-58c	4/6 ✓	<i>2 1/2 accepted as proper sounding</i> Fathogram obscured by kelp. May be deeper sdg. Needs further investigation.
18,300	115,300	125d	2 1/2 ✓	Bottom reading confused by kelp.
17,900	115,300	116-117d	4 ✓	Fathogram obscured by heavy kelp indications.
17,300	115,600	117-118d	4 ✓	"
16,700	116,000	118-119d	4 5/6 ^{5 1/2} ✓	<i>shallower sdg of 5 fms plotted from overlapping line</i>
17,300	116,200	43-44c	5 ✓	
16,300	117,100	26-27c	4 2/6 ✓	
17,600	117,500	50-51c	4 2/6 ✓	
16,700	117,400	45b	4 1/6 ✓	
16,900	118,100	99c	4 5/6 ✓	
17,800	118,500	92-93c	3 2/6 ✓	
16,200	118,200	27-28c	5 2/6 ✓	

Northing feet	Easting feet	Position	Depth fms.	Remarks
16,700	119,400	80-81b	4 ✓	
28,150 ⁰⁰⁰	106,550 ⁰	5h	Rock	awash
28,100	107,200	7h	Rock ✓	sunken
28,050	107,450	9h	Rock ✓	sunken
28,100	107,600	11h	Rock	sunken
28,100	107,750	12h	Rock ✓	sunken
28,050	107,600	10h	Rock	sunken ✓
29,850	108,150	23h	Rock	Apparently half tide ledge. See boat sheet #102. <i>Plotted *</i>
30,450	108,300	25h	Rock	" " "
30,800	108,600	27h	Rock	" <i>plotted as ledge</i>
30,050	107,950	57e	Rock ✓	sunken
30,500	108,250	26h	Rock ✓	sunken
31,300	108,900	30h	Rock ✓	sunken
31,400	109,100	31h	Rock	<i>plotted *</i> Apparently half tide ledge See boat sheet #102.
31,800	109,250	63e 49e	Rock	sunken . See boat sheet #102. <i>awash - pos. 49e</i>
28 000	105 900	67a 4/6		

Note: Other rocks along east side Alcan Cove between signals Nsp and Sap were transferred from boat sheet 102. Apparently they are half tide ledges not located by topographer, except by his inclusive foul area line. *shown by rock awash symbols*

9 a
1917
Print N-177-29, Alcan Cove, Shemya I.

by Army Engineers. - Scale 1:2,400

Forwarded with records of sheet H-6938.

This print shows in circles soundings in the west part of Alcan Cove for which we have no other record. These soundings were made for a specific purpose at the request of the Army, and the record was given to them. Signals Dot, Bea, Cup, and Mal are shown on it. Wharves which did not exist when the HYDROGRAPHER was working here are shown, as well as proposed construction.

The 8 foot sounding on the print at N 28,230 ft. E 105,480 ft. falls between soundings of 2 fms. and 2 2/6 fms. on the smooth sheet.

This sounding falls at edge of dock constructed perhaps after survey, and may be unimportant now.

See letter by Chief of Party attached

TIDAL NOTE

H-6958

Aleutian Islands

Semichí Islands - Shemya Island

Army's Tide Gage - Alean Cove - Shemya Island

Position on the Army's Local Grid

Northing 27,400 feet

Easting 106,100 feet.

Position on chart No. 9125 issued 2/25/44

Latitude 52° 43.9 North

Longitude 174 04.5 East

Staff reading of MLLW ----- 3.0 feet.

COORDINATES OF SHEMYA ISLAND POINTS

These coordinates were copied from the sheet received from the EXPLORER. They were prepared by the Army Engineers on Shemya Island, with the exceptions noted.

The Northing and Easting are in feet. The Seattle Processing Office prepared a rectangular grid, scale 1:10,000, with 5,000 foot grid lines. The odd distances from the grid lines on either side of the point concerned were converted to meters for plotting as DM's and DP's using a 1:10,000 scale. These distances in meters follow the Northing and Easting in feet.

Signals Top, Lot, Lee, Gab, and Fox were included in Scaife's topo, and were used to join the EXPLORER's and HYDROGRAPHER's work. Fox was known as Las by the HYDROGRAPHER's party.

Top was obtained by scaling from the Army topo sheet, scale 1" to 200 ft., using the contoured hill as the location. See tracing attached

Signals Lot, Lee, and Gab were located and plotted by the Army Engineers on a sheet, scale 1" to 400 ft. The coordinates were scaled.

Triangulation station Shemya was computed from the local Engineers' distance and azimuth as shown on their traverse sheet. The G.P. is believed to be on Scaife's datum.

NAME	COORDINATES <small>Furnished by Army Engineers - except where otherwise noted</small>				DESCRIPTION
	NORTHING Feet	METERS	EASTING Feet	METERS	
Abe	19967	(10.1) 1513.9	124233	(233.8) 1290.2	White Wash on point.
Bet	20170	(1472.2) 51.8	123657	(409.4) 1114.6	White Wash
Bar	20750	(1295.4) 228.6	123260	(530.4) 993.6	White Wash on beach.
Cap	20785	(1284.8) 739.2	122765	(681.2) 842.8	Red & White square signal
Sig	20692	(1313.1) 210.9	121929	(936.0) 588.0	Red & White triangular signal.
Tri	20719	(1304.8) 219.2	121905	(943.4) 580.6	Pyramid of yellow drums
Axe	21025	(1211.6) 312.4	120916	(1244.8) 279.2	Piling at eastern end of runway.

NAME	NORTHING Feet	METERS	EASTING Feet	METERS	DESCRIPTION
		(1283.2)		(1346.3)	
Dog	20790	240.8	120583	177.7	Small white cross
		(1319.8)		(1421.3)	
Fox	20670	204.2	120337	102.7	Big white wash on pt. reef.
		(1508.5)		(804.7)	
Tow; Tower	25051	15.5	122360	719.3	Main Radar Aerial
		(905.3)		(1104.9)	(Water tank)
Wat; Quack	32030	618.7	111375	419.1	Main Radar Aerial
		(320.4)		(1421.3)	
Radio Tower #1	28949	1203.6	110337	102.7	
		(556.0)		(1244.5)	
Radio Tower #2	28176	968.0	110917	279.5	
		(466.4)		(1436.2)	
Radio Tower #3	28470	1057.6	110288	87.8	
		(333.2)		(1349.3)	
Radio Tower #4	28907	1190.8	110573	174.7	
		(1146.1)		(636.7)	
Red	26240	377.9	102911	887.3	
		(340.8)		(1419.1)	
Skoot	23882	1183.2	105344	104.9	
		(519.7)		(1266.4)	
Mat	23295	1004.3	110845	257.6	Red & White triangular signal
		(509.9)		(42.1)	
Cir	23327	1014.1	109862	1481.9	White circle on rock
		(792.5)		(997.0)	
Low	22400	731.5	111729	527.0	White Wash
		(732.1)		(1034.5)	
Top	32598	791.9	111606	489.5	Scaled from 1 st to 200 ft. Army topo sheet. - Hill Top
		(1232.0)		(113.8)	
Pol; Sal	20958	292.0	119627	1410.3	Red flag on pole
		(1256.1)		(460.6)	
Hen; Ten	20879	267.9	118489	1063.4	Red and white signal
		(1205.5)		(896.1)	
Can	21045	318.5	117060	627.9	Pyramid of three barrels.
		(1147.6)		(1115.3)	
Lot; Pup	21235	376.4	116341	408.7	Red & white signal
		(887.3)		(1041.8)	
Con	22089	636.7	116582	482.2	Control tower (Airport)
		(1078.7)		(1348.7)	
Jig	21461	445.3	115575	175.3	Three white barrels
		(1156.7)		(399.3)	
Kid; Out	21205	367.3	113690	1124.7	White wash on rock.
		(917.4)		(748.0)	
Nut; Ned	21990	606.6	112546	776.0	White wash on rock
		(472.4)		(418.8)	
Flat; Cam	23450	1051.6	108626	1105.2	Red & White signal flat on rock

NAME	NORTHING Feet	METERS	EASTING Feet	METERS	DESCRIPTION
Pin; Bag	23289	(521.5) 1002.5	107778	(677.3) 846.7	White wash on rock
Let; Ace	23583	(431.9) 1092.1	106892	(947.3) 576.7	White wash on rock
May; Gor	24308	(210.9) 1313.1	104545	(138.7) 1385.3	Red tripod (Ord.)
HECP; Master	27828	(662.0) 862.0	104806	(59.1) 1464.9	Port Captain Signal Tower
Lot	27381	(798.3) 725.7	105986	(1223.5) 300.5	In the bight of Alcan Cove
Lee	27615	(727.0) 797.0	106906	(943.1) 580.9	"
Gab	27885	(644.7) 879.3	108067	(589.2) 934.8	"

Scaled
from
Print
N-177-P-23

△ SHEMA 1943
 31805.81 550.4 110857.59 261.4
 Lat. 52° 45' 06" 559 N Long. 174° 05' 45" 035 E

Computed by dist. and az. from traverse
 point Qua. (S 71° 54' 21" W - 489.6 ft)

Qua N 31 957.87 Ft
 E 111 322.98 Ft

111 000

112 000

33000

5
10

15

20

25

30

35

40

60

80

100

120

140

160

180

32000

200

215

210

230

235

240

160

Location of signal TOP

260

255

250

245

240

235

230

225

220

215

210

205

200

195

190

185

180

175

170

165

160

155

150

145

140

135

130

SHEMA ISLAND
 Section of Sheet 2 of 8 Sheets
 Scale 1" = 200'
 U.S. ENGINEER Office SHEMA ALASKA
 File No. N-177-P-34 Date: 12-15-43
 Traced in the Seattle Processing Office

Statistics:

	Stat. Miles Sounding Lines	Positions	Area Square Stat. Miles
HYDROGRAPHER-	193.4	1120	
EXPLORER	<u>185.5</u>	<u>792</u>	
Total-	378.9	1912	23

Edgar E. Smith

Edgar E. Smith
Assoc. Cartographic Engineer
Seattle Processing Office.

Approved and Forwarded:

F. H. Hardy

F. H. Hardy
Officer in Charge
Seattle Processing Office.

LIST OF SIGNALS

By 7-6958
HYDROGRAPHER (See Planetable sheet 103 on
brown boat sheet paper.)

Art	Gab	Ram
Ball	Gun	Red
Bea		Rock
Ben	Hen	Rock
Bird	Her	
Black (Hydro Vol. 7)	Joy	Tent
Bolo (Same as Lie, SURVEYOR)	L	Pin
Box	Lar	Top (See also tracing in report)
Boy	Las (Same as Fox, EXPLORER)	
	Lee	Try
Cal	Lit	Tuk
Cone	Lof	
Cut		Sap
	Mar	Shag
Dad	Mid	Sis
Dot	Mid	
		Up
East	Nex	
	Nip	West
Far		
Fun	Pas	
	Pin	

By
EXPLORER (See also List of Coordinates
in report)

Abe	Dog	Pole (Hydro Vol. 2)
Ace		Pup
Axe	Fox (Same as Las, HYDROGRAPHER)	
		Rad (Hydro Vol. 2)
Bag	Gor	Red
Bar		
Bet	Low	Sal
		Sig
Cam	Mat	Skoot
Cap		
Cir	Ned	
Con		
	Out	

821
22/MEK
1990

80 JM
8 2 Reuk
August 19, 1944.

To: Lieutenant Commander Casper M. Durgin,
U. S. Coast and Geodetic Survey,
400 Insurance Building,
Seattle-4, Washington.

Through: Supervisor, Northwestern District.

From: The Director,
U. S. Coast and Geodetic Survey.

Subject: Additional work, hydrographic sheet 6938,
Shemya Island, Alaska.

Under separate cover three boat sheets for hydrographic sheet No. 6938 are being sent to you. Notes have been placed on these sheets indicating where additional work should be accomplished.

You will please assign this additional work to one of the parties operating in this area to be accomplished this year, if practicable.

(Signed) L. O. COLBERT

Director.

cc. Supervisor, Northwestern District
Seattle Processing Office
Division of Charts

200
ACE

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 10, 1944

~~Division of Hydrography and Topography:~~

✓ Division of Charts: Attention: H. R. EDMONSTON

Plane of reference approved in
10 volumes of sounding records for


HYDROGRAPHIC SHEET 6938

Locality Aleutian Islands, Semichi Islands: Shemya Island

Chief of Party: W. M. Scaife and G. C. Mattison in 1943
Plane of reference is mean lower low water reading
3.0 ft. on tide staff at Shemya Island
6.3 ft. below B. M. 1 (1943)

Height of mean high water above plane of reference is 3.7 feet

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO.

Records accompanying survey:

Boat sheets; sounding vols.; wire drag vols.;
bomb vols.; graphic recorder rolls;
special reports, etc.
.....

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	1817.
Number of positions checked	..91.
Number of positions revised	..14.
Number of soundings recorded	9000. Approx
Number of soundings revised (refers to depth only)	319.
Number of soundings erroneously spaced4
Number of signals erroneously plotted or transferred	...0.
Topographic details	Time .3..
Junctions	Time ..9..
Verification of soundings from graphic record	Time .17..
Verification by <i>R.H. Carstens</i>	Total time .77.. Date <i>June 26, 1944</i>
Review by <i>R.H. Carstens</i>	Time .20.. Date <i>June 29, 1944</i>

H-6938

Remarks

Decisions

	Remarks	Decisions
1		
2		
3		525745R USCB
4		" "
5		"
6	Follow usage on chart 9125 rather than Skoots Island on AMS map	"
7		"
8		
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25		
26		
27		
234		

GEOGRAPHIC NAMES

Survey No.

H-6938

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
<u>Alaska</u>											1
<u>Alutian Islands</u>											2
<u>Semichi Islands</u>											3
<u>Shemya Island</u>											4
<u>Alcan Cove</u>											5
<u>Skz Scoot Island</u>											6
<u>Fox Beach</u>											7
											8
											9
											10
											11
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											27

Names underlined in red approved
by L. Heck on 7/5/44

DIVISION OF CHARTS

REVIEW SECTION - SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6938

Aleutian Islands, Semichi Island, Shemya Island
Surveyed May - November 1943; Scale 1:10,000
Instructions dated April 16, 1943

Soundings:

Navy NJ-3, NMB-2
and NK-1 Fathometers
808 Fathometer
Sounding pole
Hughes Fathometer

Control:

Three-point fix on shore signals

Chief of Party - G. C. Mattison; W. M. Scaife
Surveyed by - Ship's Officers
Protracted by - W. M. Martin
Soundings plotted by - W. M. Martin
Verified and inked by - R. H. Carstens
Reviewed by - R. H. Carstens
Inspected by - H. R. Edmonston, June 29, 1944

1. Shoreline and Signals

The shoreline originates with T-6958 (1943) and the Army Engineers' Survey shown on blueprint 37891. Segments of the high-water line in areas not covered by T-6958 were the only features transferred from B.P. 37891. The signals originate with T-6958, sextant cuts recorded in the sounding records, and Army Engineers' traverse positions listed in the descriptive report. A complete discussion of the adjustments in signal positions and shoreline is also given in the descriptive report.

2. Submarine Relief

In inshore areas the bottom is extremely irregular and contains numerous pinnacle rocks many of which are covered with kelp. South of the east end of the island depths of less than 10 fathoms extend as much as 2-1/2 miles offshore.

Except in the areas to the south of the island where hydrography was not carried inshore to the ledge line, the usual depth curves could be satisfactorily drawn.

3. Sounding Line Crossings

Satisfactory.

4. Junctions with Contemporary Surveys

No contemporary surveys in this area are registered at the present time.

5. Comparison with Prior Surveys

No prior surveys of the area have been made by this bureau.

6. Comparison with Chart 9125 (Latest print date 2-25-44)

a. Hydrography

The charted hydrography originates with preliminary compilations of the boat sheets of the present survey. There are differences of as much as 50 meters in position and 5 feet in value between some of the smooth sheet and boat sheet soundings. The present survey position of the ledge in the vicinity of coordinates 31000, 109000 is 50-100 meters further offshore than it is charted and the present survey position of the rock awash in 22700, 105000 is about 150 meters from the charted position. The reef in 22500, 99000 is charted about 70 meters from the position shown on the present survey.

b. Aids to Navigation

The survey positions of aids to navigation are in satisfactory agreement with the charted positions and satisfactorily mark the features intended.

7. Condition of Survey

Satisfactory, except that a speed correction was not applied to a portion of "a" day of Launch 2 when the meter speed of the fathometer increased about 10%. The type of fathometer and other data were not always recorded at the beginning of the day. No polyconic projection is shown on this survey because the connection between local triangulation and this bureau's scheme is still incomplete.

8. Compliance with Instructions for the Project

Satisfactory, except that critical soundings in kelp areas were not checked by the hand lead, few bottom characteristics were taken and the cross lines totaled only about 3% of the regular system of sounding lines.

9. Additional Field Work Recommended

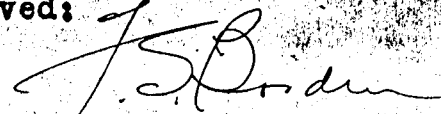
When the opportunity occurs it would be desirable to complete the inshore hydrography on the south side of Shemya Island, to run split lines in depths less than 10 fathoms between the 150-200 meter lines in this vicinity and to develop the shoal at coordinates ^{covered by W.D. 1944} 36000, 111000. Hand lead verification of the least depth on the 1-1/2 - 1-5/6-fathom shoal in 20000, 115000 and the 4/6-fm. spot in 28000, 105900 is also desirable.

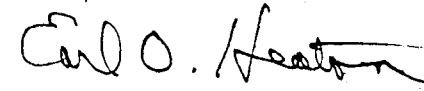
10. Superseded Surveys


None.

Examined and approved:


Chief, Surveys Branch


Chief, Division of Charts


Chief, Section of Hydrography


Chief, Division of Coastal Surveys

Applied complete to ch. 9125 except for area off N.W. end
of island covered by 1944 survey. GFE. 8/25/44

Applied to chart 9198 F.M.A. 9/7/44